ARCHITECTURE

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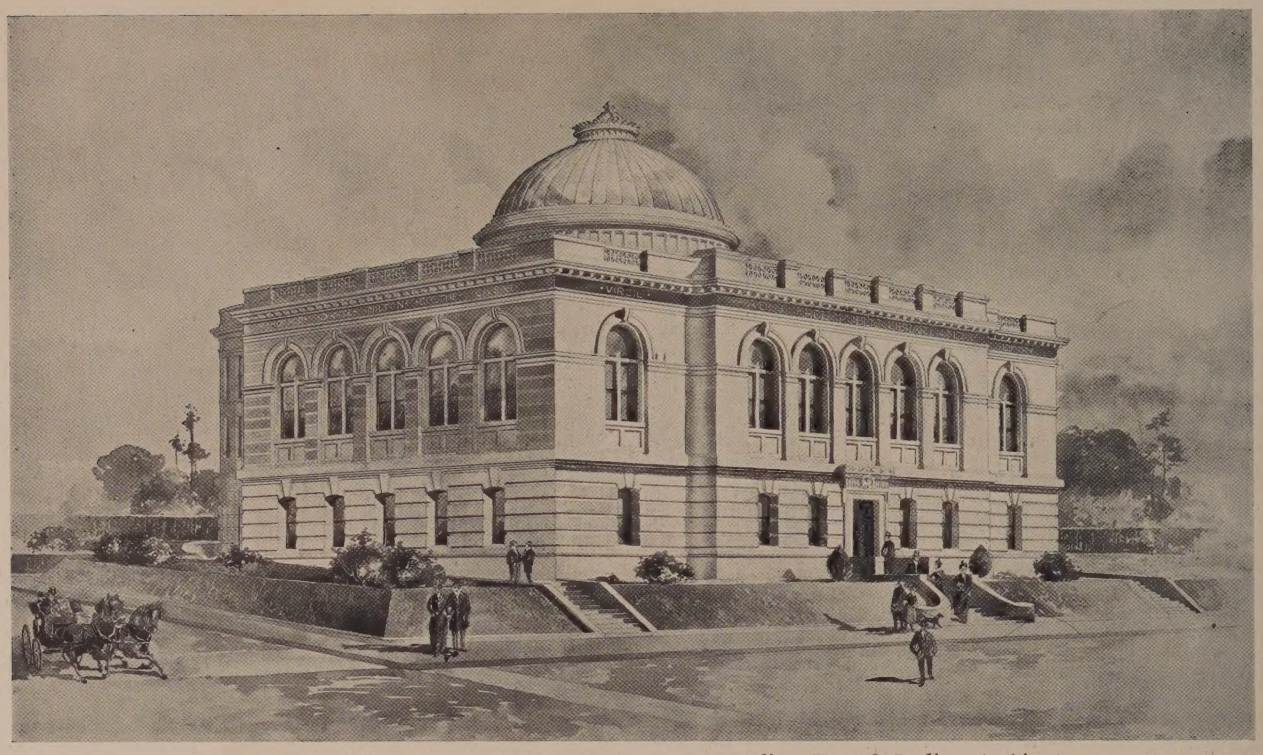
ILLUSTRATIONS.

IN THE T Square Club (Philadelphia) syllabus for the coming year there are set forth six programmes for competitions bearing upon a series of subjects of more than passing interest; subjects which, for a long time not having had their importance fully realized in this country, are now receiving the close attention of various architectural societies and also of the municipal authorities of our cities as well. The following are the subjects: Designs for suitable and artistic bill-posting facilities; a small city square; an elevated railroad station; a series of street accessories; a public wash house; and an arrangement for public conveniences.

A HOUSE built on an octagonal plan is described by a Philadelphia paper, whose correspondent vouches for some special advantages in a building of this shape. It is, it is claimed, more compact and more readily heated than the long, square houses now generally built. Through the middle of the house, from the ground floor to the roof, is a stairway, and the rooms are built around this. There are four chambers, which are square, or very nearly so, and sandwiched among these are four smaller and irregularly-shaped rooms, which are available for playrooms, servants' room, sewing-rooms, and similar purposes. The heater in the cellar is located directly in the middle of the house, and the pipes radiating from it in no case extend more than four or five feet, where they take an upward turn and are carried to the upper floors through an interior wall, following the general lines of the outer wall. These pipes go directly by the shortest line to the rooms which they are intended to heat, and therefore very little of the heat is lost in the process of delivery. The occupant of the house says that his coal bill was less than half that of his neighbor, who occupies a stone house rectangular in shape. In the summer time it has a like advantage. No matter from which direction the wind blows, a fine current of air can always be found there. By throwing open the windows of a cupola on the top of the house and opening the doors and windows at that side from which the wind is blowing a strong draught is immediately experienced, the walls acting like a chimney.

THE most troublesome of all problems that the architect has to solve are those relating to foundations, where they have to be carried down to a considerable depth, in a bad soil, where it is difficult to keep out the water, and where piling, pumping, shoring, and other operations have to be undertaken. The duties of the engineer and the architect meet here. Perhaps the architect has not had much experience of this kind of work, and he may, indeed, object to become responsible for a class of labor he does not understand. There may be tidal difficulties to overcome, pumping operations, coffer-dam construction, &c., and it may be desirable to appoint an engineer experienced in this branch to superintend the operations, as by so doing



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(See pages 300-301 for plans.)

the architect can devote his chief attention to his own duties. Inasmuch as foundations of this kind form a large item, the architect does not care to lose his commission on the outlay. We are now speaking of foundations involving special protection against tidal water by sheet piling, coffer-dams, or cribs; those in which quicksand or soft semi-liquid soils have to be dealt with, requiring the use of centrifugal or mud-pumps, or those in which it is necessary to drive piles at uniform distances over the area of soft soil and construct grillages upon them. These underground operations take some weeks or months to carry out; the work is hidden from sight, and the architect reaps little advantage from them except in a pecuniary sense. The question arises, Do such foundations come within the duties of an architect's vocation, or is it desirable that they should be placed under his supervision? We think it better that such a question should be answered by the circumstances of each case. If the foundations are particularly intricate and laborious, and the building is of an elaborate character and involves considerable attention on the part of the architect, we should certainly place them in the hands of an engineer accustomed to such work, though, of course, the architect should exercise a general control. As a matter of fact, the architect undertakes to design and carry out a building on a given sight. He does not know—he cannot, in fact, foretell—what the foundations are like, and he certainly does not anticipate much difficulty, or prepare for weeks of labor underground. His real work comes into play above the foundation level; but not always. Of late years, in our large cities, where land is very dear, the architect has to make designs for buildings not only above, but below, ground, and a new condition comes into existence. A given level is not prepared for him to erect his building; but he has to make an excavation or a receptacle underground for his structure—a rather different matter. The excavation forms part of the design, as the problem is to construct a building below the ground level.

LOUISIANA PURCHASE EXPOSITION.

THE size of the Louisiana Purchase Exposition buildings at St. Louis has been determined. The largest will cover 32½ acres, and will be devoted to agriculture and allied industries. Seven other buildings will cover about 17 acres each, and four others about 9 acres each. The total now planned for will amount to about 187 acres. The sizes of the buildings are as follows: Agricultural Building, 700x2,000 feet; Manufacturers' Building, No. 1, 600x1,200 feet; Manufacturers' Building, No. 2, 525x750 feet; Social Economy Building, 550x700 feet; Liberal Arts Building, No. 1, 600x600 feet; Liberal Arts Building, No. 2, 525x750 feet; Transportation Building, 600x1,200 feet; Education Building, 550x700 feet; Art Building, main division, 300x600 feet; two wings, each 200x300 feet; Mines and Metallurgy Building, 600x1,200 feet; Service Building, 300x300 feet; Electricity Building, 600x550 feet; U. S. Government Building, 100,000 square feet. A uniformity of cave lines will be observed to a height of 65 feet. The total cost of the buildings has been estimated at $7,000,000. Several other buildings are to be erected. Carrere & Hastings, of New York, will design the two Liberal Arts buildings.

REMARKABLE ENGINEERING WORK.

CONSTRUCTION work on the $2,500,000 annex to the Mutual Life Insurance Company's building, fronting on Liberty, Nassau and Cedar Streets, which is in several respects the most remarkable structure in the world, is now nearing completion. Remarkable engineering work has been done, with the result that the cellar floor is fifty-five feet below the sidewalk level and thirty-five feet below the line of standing water. The foundations rest on bed rock one hundred feet below the surface of the ground.

Above the sidewalk the annex is eight stories in height in Cedar Street, matching the older extension in that street, while it towers sixteen stories high in Liberty Street. The addition alone covers an area of sixteen thousand square feet, or about seven city lots.

The building at No. 32 Liberty Street, one wall of which had to be underpinned, is eighteen stories in height, and the highest building ever so treated. The work was complicated there also by the fact that the ground floor was filled with the safes and vaults of a safe deposit company, and a settlement of the sixteenth of an inch would have stopped the working of the locks.

Caissons formed of steel tubes, 3 feet in diameter, were sunk to support the adjoining buildings, and then work was begun on the foundations proper. A discovery that under the hardpan there was a formation of loose sand and crumbling rock in places thirty-two feet deep, forced the excavators to go to solid rock with all the main caissons, and this was about one hundred feet below the sidewalk.

A complete enclosure of the lot was made by sinking thirty steel caissons, each 8 feet in width, and ranging from 15½ feet to 22 feet in length. When these were down to the rock a complete water-tight enclosure was made by ramming the spaces between the caissons full of red clay from New Jersey.

This was done by sinking a 3-inch pipe between the caissons by means of a water jet, dropping cores of clay into the pipe and then forcing this out by dropping a heavy steel bar upon it. The pipe meantime was drawn up foot by foot until the whole of each space was filled.

Thus it was possible to excavate to the hardpan for the cellar floor without draining away the quicksands and bringing down buildings perhaps for blocks.

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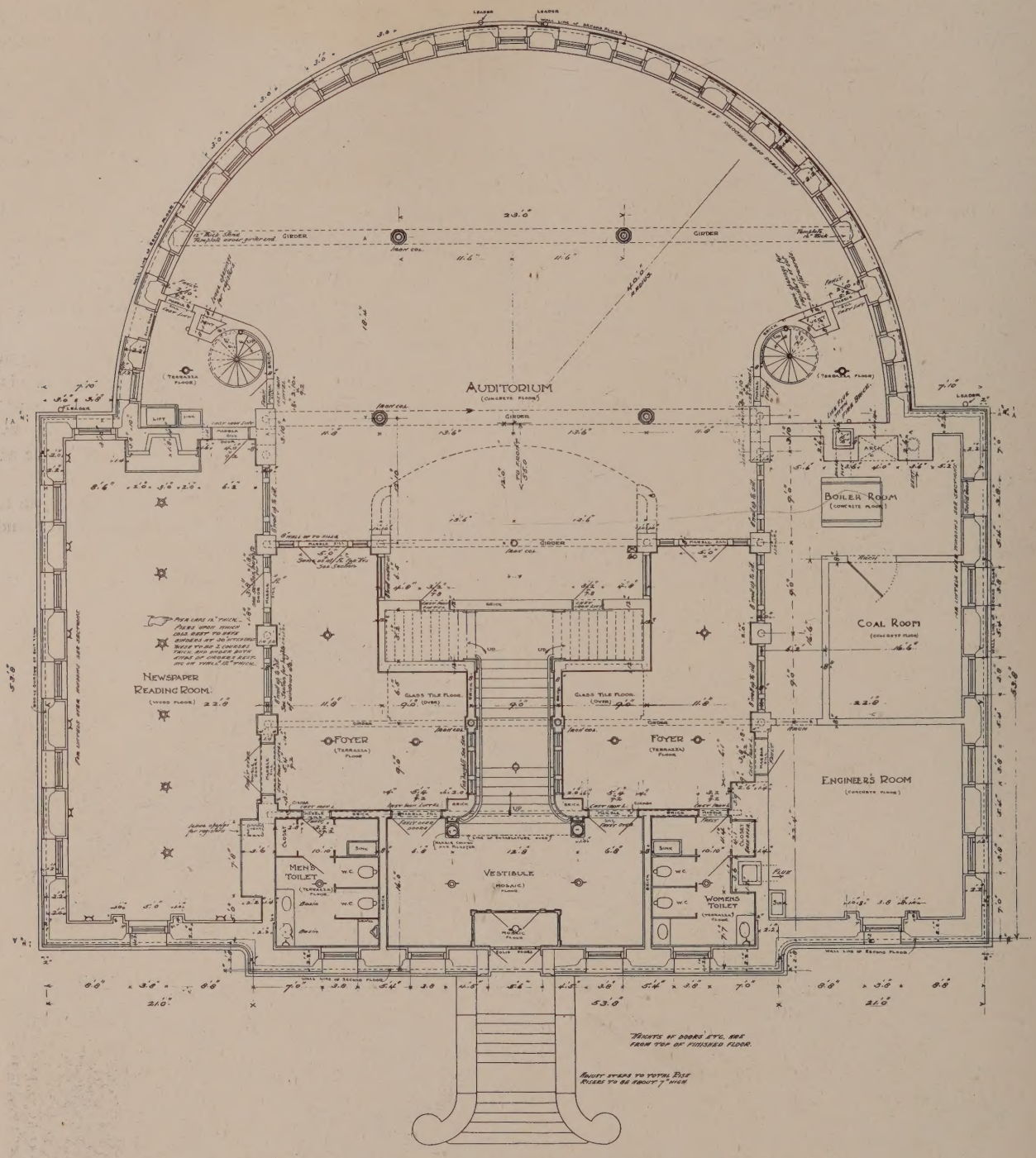
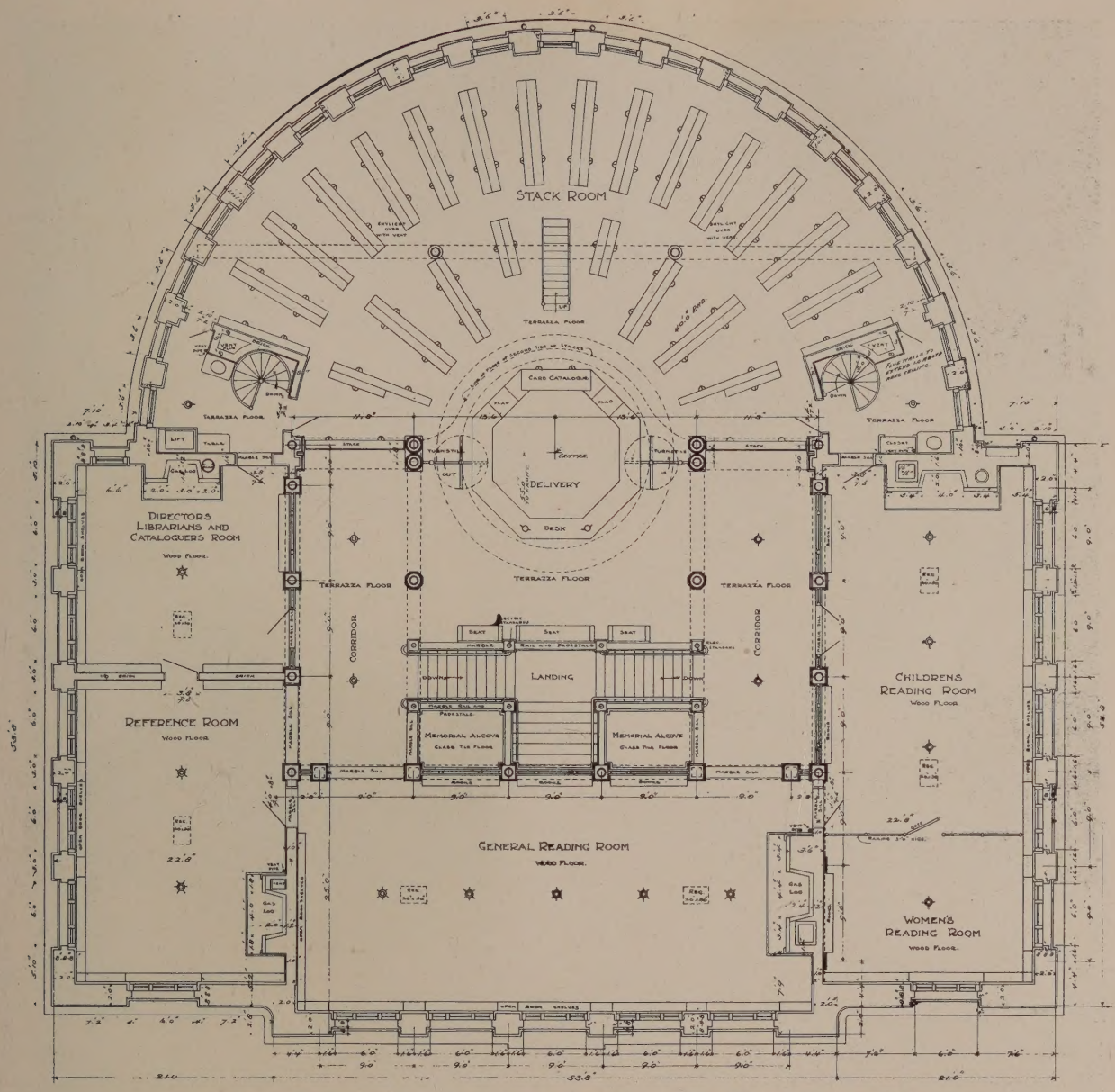


FIRST STORY PLAN, PUBLIC LIBRARY, TACOMA, WASH. Jardine, Kent & Jardine, Architects.

PRIZE DESIGN ARCHITECTURE.

C. F. HULL.

THERE is a great deal that is uninspiring in the work of men who have set tasks given them, as, for example, in buildings intended for state purposes, public offices, schools, prisons, post-offices, and the like; in the same manner there is much that is unattractive and disappointing in designs of students who compete for prizes and medals. In both cases there is a want of spontaneity. The government architect has his appointed task set by authority; it is more or less hedged around by restrictions and regulations that are uncongenial to the artistic mind. The student-competitors for prizes or medals show, to some extent at least, the same want of sympathy with the themes that are propounded or put before them. When we inquire into the reasons that make the academic designs for buildings so different to the real and practical work of the architect, we shall find that they are mainly due to the artificial limitations imposed. The practical architect



SECOND STORY PLAN, PUBLIC LIBRARY, TACOMA, WASH. Jardine, Kent & Jardine, Architects.

who is commissioned to design a certain building, though he is restricted to certain conditions and has to meet particular requirements, is independent in the choice of plan and style;—he proceeds, from certain facts of situation and requirements and materials, to evolve his plan and elevation. On the other hand, the competitor for a prize design works on a different basis: he begins to think of a style or elevation that may be made to suit his subject. He does not consult the subject so much as the way he is to present it to the eye in a drawing. The real conditions in the latter case are not imperative;—they do not exist, and the effort is one rather of making a drawing than of working out a scheme.

The student takes an ideal plan of a cathedral or some national gallery that will adapt itself to a grand and imposing facade; he selects—he does not evolve—a plan out of real conditions, so that his elevations are what he intends them to be, and not what he can make of them after his plan has been perfected. The student has more to blame his instructors for than his own desire to avoid thought by setting before him themes of a grandiose and pretentious kind. Viollet-le-Duc and others strongly censured the academical system of instruction given in the art schools of Paris, which, by encouraging the study of the antique, had set a premium on copyism and destroyed any independent study in design. The architectural schools have taught the student to design by precept and example, instead of setting before him a programme based on the laws of materials and construction and practical data, and therefore it is we find so little real merit in most of the designs for which prizes are awarded. The architectural student or youthful aspir-

DINING ROOM, RESIDENCE, WILLIAM DISSTON, CHESTNUT HILL, PA. Keen & Mead, Architects.

ant who is attracted by the higher exercises of his art will naturally compete for designs of a pretentious character. They catch the popular eye, while there is little acclaim in everyday buildings like cottages and houses, or in studies of features like gables and elevations of shops; but it should be the effort of the instructor to restrain these flights of the imagination, and endeavor to lead the pupil to realize that there is art just as high and noble in the design of a laborer's cottage and in the lines of a gable or a chimney.

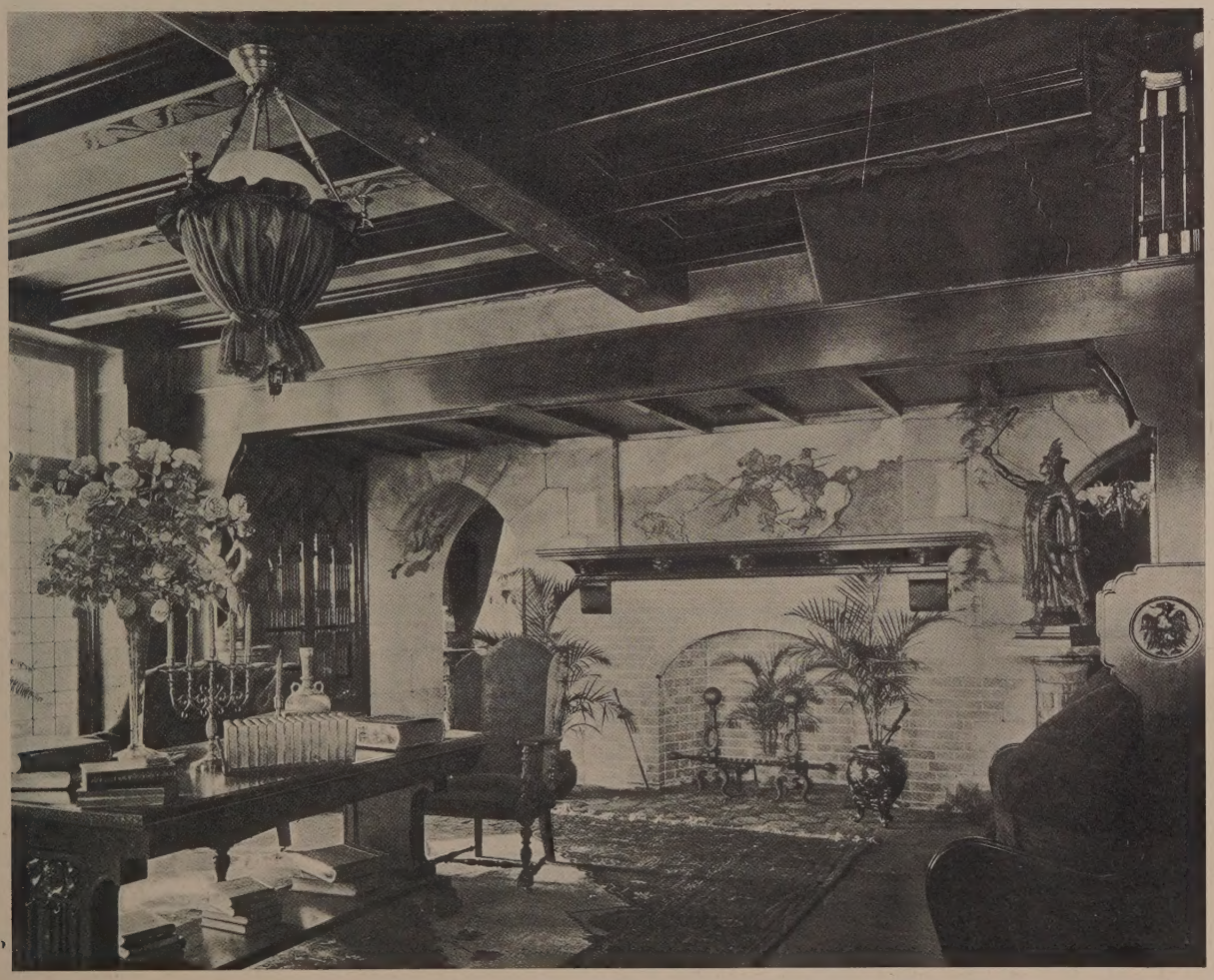
ARCHITECTURAL INSTRUCTION.

A. D. RUSSELL.

THE absolute importance of raising the standard of the architect's education is admitted by all, but has rather obscured the more personal question of drawing out and developing the student's capabilities. At present there are two views expressed on the education of the architectural student. One of these is that he should pass through a scholastic course of instruction on a systematic basis, embracing a variety of subjects—architectural history, ancient and modern; French and German; archæology; ancient and modern ornament; historical, architectural, and freehand drawing; elements of architecture, composition, color, planning, and other practical subjects. The other view is to bring out the student's capacities in any branch, and assist and develop his studies in given directions. The first is the University ideal; it is the one standard to which the efforts of the profession should be directed if they wish to obtain University recognition for the architect's education. Every pupil cannot rest satisfied with his office knowledge of construction in brickwork, masonry, and carpentry. He naturally desires to know something of the forces that come into play, such as weight, thrust, tensile stress, and bending, as well as the properties of materials. He can learn much from a few well-selected textbooks; but he needs the directing hand of the demonstrator or lecturer to tell him how to proceed. At this early stage a few easy examples showing the calculation for the strength of piers and columns for finding arch thrusts and stresses in roofs may be of more value than analytical mechanics, statics, and the differential and integral calculus, subjects he knows very little about. Yet these subjects are placed in the first and second years' courses in many of the Universities, as in the School of Architecture in Columbia University, New York, and the more

practical applications come under the third and fourth years' courses. Thus in the fourth year the advanced architectural engineering subjects come in for study: "practical examples in applied mechanics, treated both graphically and analytically; problems in constructive design; study of building processes," just the sort of subjects which should be given to the student fresh from office work who is anxious to know something of the method employed in designing foundations, retaining walls, pillars, beams, trusses, arches, and vaults. We think that there is here a reversal of the proper order. If the *concrete* before the *abstract* is the right procedure, as laid down by Herbert Spencer, and other authorities on education, as based on mental development, the first year's course ought to give the applications to ordinary structures of the principles of mechanics, and this procedure is in correspondence with all we know of school teaching. Facts before theories, examples before principles, have been found most favorable to the pupil's progress. We know this is not the scholastic course, but its success is borne out by the experience of teachers. To those youths who desire to receive a more liberal education before they begin their professional course, the University course is the right one; but we are speaking here of the average young man who enters the profession, and whose mathematical knowledge is often very limited. To him the theory comes best through the facts. A tangible illustration is more intelligible, and he can be taught better through a drawing, or from seeing an arch or a buttress, or a roof truss, than he would be from a a learned disquisition full of algebraic equations.

Again, the youthful pupil is set to draw elevations of buildings in different styles and he wants to know more about them than his master vouchsafes to give *viva voce* instruction or books. A youth fond of historical inquiry may prefer this study to mathematics; he has a desire to know something of ancient art and the various styles practiced, because of a passion with him for names and dates—just as some students take to subjects like zoology or botany, because of their liking for classification and names of genera and species. The student of this kind will derive much information from lectures on ancient art, and of Mediæval and Renaissance and other derivative styles if illustrated by diagrams and lantern-slides. A few dry outlines of chronology and styles would be of little value. Architectural history can only be properly taught with the aid of photographs or photographic illustrations, or casts, so that the student may get a vivid and discriminative impression of each style. But when the styles



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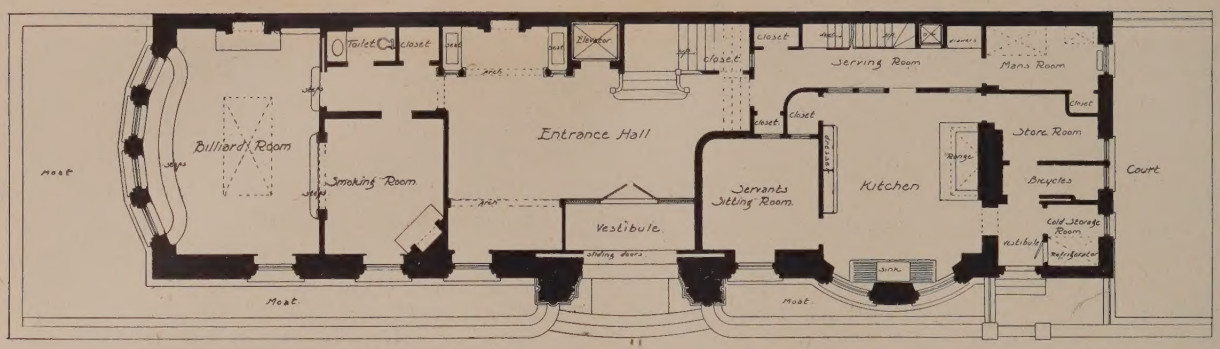
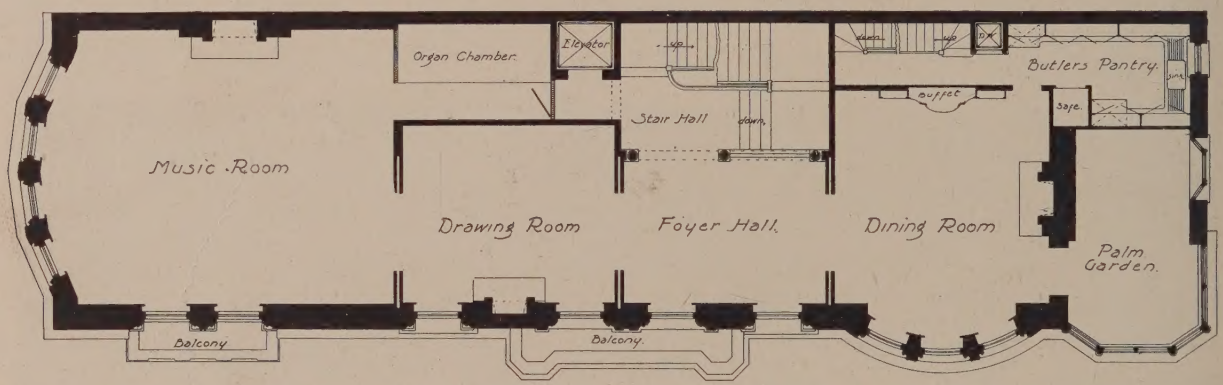


GROUND FLOOR PLAN, RESIDENCE, F. W. WOOLWORTH, FIFTH AVENUE AND EIGHTIETH STREET, NEW YORK.
C. P. H. Gilbert, Architect.

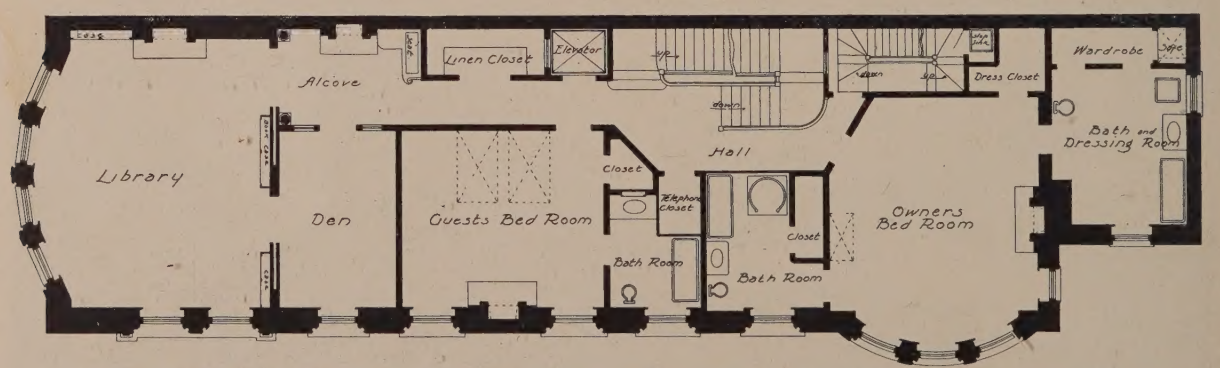
are well known by the student, verbal instruction will suffice, as those given in the Continental and American schools. Thus, to quote the Columbia University second year's course, the subjects in modern architectural history are: "The Renaissance, modern revivals, Oriental, and American architecture, with reading of a French textbook in one class, and of a German textbook in



FIRST STORY PLAN, RESIDENCE, F. W. WOOLWORTH, FIFTH AVENUE AND EIGHTIETH STREET, NEW YORK.
C. P. H. Gilbert, Architect.

another. Research in library and drawing-room." In the third year's course, Byzantine, Romanesque, Gothic, with reading of French and German textbooks, and research as before, are prescribed. The historical or archæological instinct is strongly developed in some students, and forms one special branch of education. It has an interest apart from the practical requirements of the

Take "specifications" and "building materials"—two very important subjects; the desire to learn these subjects is the preliminary to the student's progress in them. They may be given to pupils as tasks in a class with little benefit, but he may take to them when he feels their need, in his own way and time, when comparing work executed with the specified provisions, and in examining



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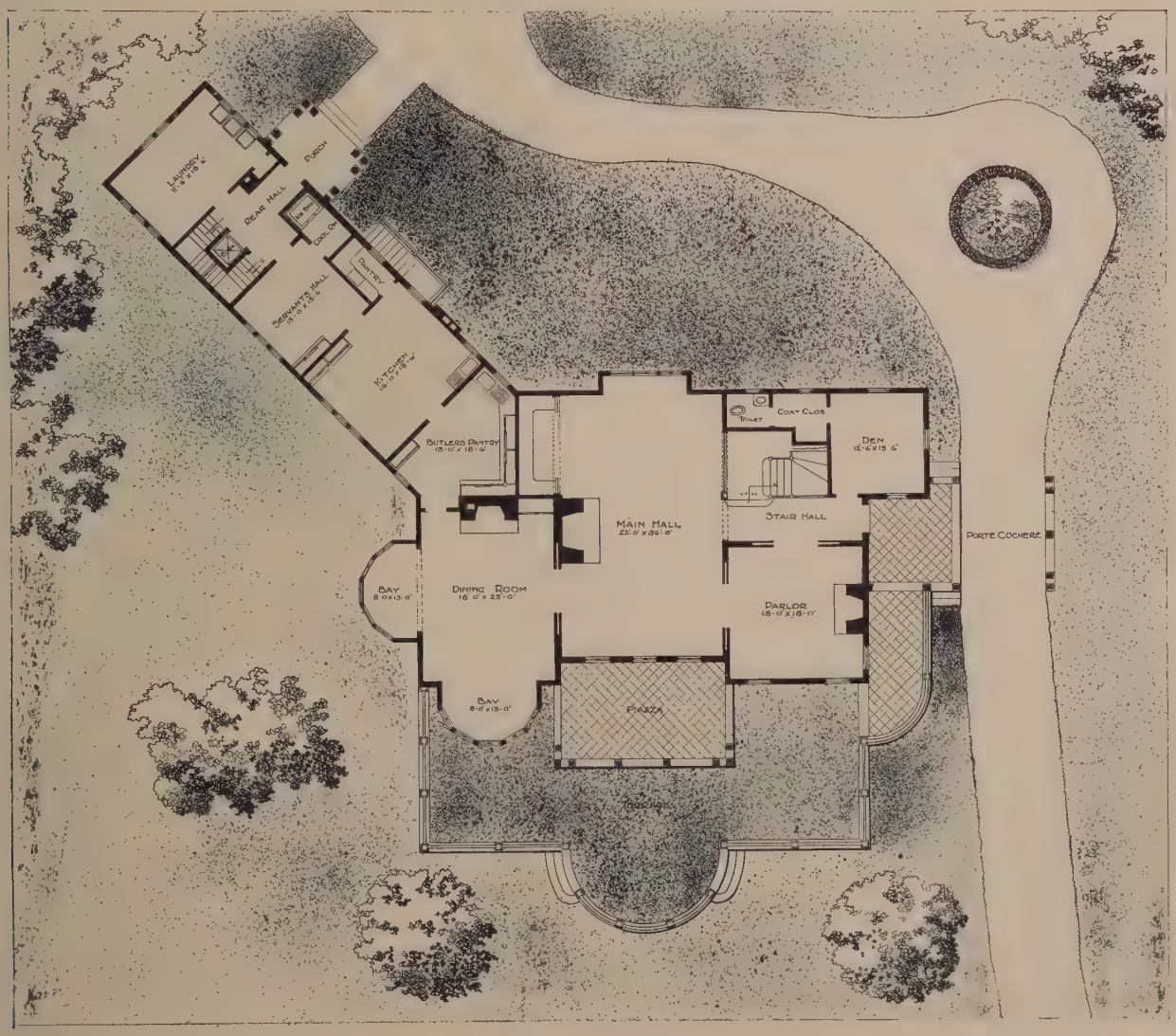
RESIDENCE, R. A. PEABODY, CEDARHURST, L. I.

Renwick, Aspinwall & Owen, Architects.

materials supplied to the building. These are two subjects that must be learned practically and in touch with actual building; set clauses without objective, framed as models of phrasing, will not help much at this initial stage, so that, in short, for the younger pupils of the class we generally find in offices, the higher course of instruction given in these Universities is too extended, and not the kind best calculated to prepare the student for practice. When he leaves office he wants "coaching up" in a few subjects to prepare him to enter into the duties of assistant without having to sever his connection with practical work for a three or four years' course.

But to those intending to enter the profession, who by position, means, or attainment are fitting subjects for such higher education, the courses of instruction of the School of Architecture in Columbia University arranged by Professor Ware leave little to be desired. They comprise all that the architect requires, and it may, perhaps, be said, more than he will have occasion to use; but the studies thought superfluous are really necessary for a perfect comprehension. The University education supplies the groundwork of his professional and special studies. Architects as professional men require a liberal training quite as much as the lawyer or physician. Experience has shown that those who have taken a liberal course of study in the past, and have enjoyed the advantages of such an education before beginning their technical studies, have attained a much higher standing in the profession, have exercised greater influence on the community, and have been much more useful men than those who have relied upon a purely scientific or professional course of study. No one will deny this statement, provided that the recipient of this training is a man of ordinary ability; indeed, a man with a good liberal training is a far better man than the same man without it. But circumstances alter cases. We have to consider a number of youths who can not spare the time or the means to undergo a three or four years' course in a University school; others who have to begin work as an assistant directly their pupilage is over. Such men must rely upon their ordinary school education before they become pupils; afterwards they have little time or inclination to pursue



GROUND AND FIRST STORY PLAN, RESIDENCE, R. A. PEABODY, CEDARHURST, L. I. Renwick, Aspinwall & Owen, Architects.

HALL, RESIDENCE, R. A. PEABODY, CEDARHURST, L. I.

a complete collegiate course. To all such the scientific or professional knowledge is absolutely essential, and must be learned by properly conducted courses, such as those which are now given in our architectural schools. But the courses given at many of the Continental and American Universities include a great deal of the preliminary training of a collegiate programme, so that if the student has the advantage of receiving such a training at the earlier stage, before beginning his technical studies, several of the subjects prescribed can be omitted, and he can confine his attention to professional studies that are within his means. To overtax the student of this class with a bewildering number of subjects is detrimental to his real acquirements, and certainly encourages "cramming," the result of which is prejudicial to real thought and artistic power. The course of instruction given at the Columbia school includes architectural engineering, analytical geometry, mechanics, statics, and modern architectural history, history of ornament, specifications, building materials, projections, shadows, elements of architecture, architectural essays, design problems, historical designs, composition, drawing, freehand, theory of color, &c.

Of these subjects the elements of architecture, architectural essays, design problems, and composition are of special value to the architect, and, we believe, are well attended. If a probationary or entrance education could be insured, as we have shown above, including mathematics to quadratic equations and plane trigonometry, physics, chemistry, and the elements of English, French, and German, and history, the student would be sufficiently equipped for the other special and technical subjects. We must wait for the accomplishment of a scheme of this kind applicable to the grades or classes of students who yearly join the profession. The idea of forcing upon the architects' pupil when he leaves the office a full and highly advanced course of instruction unless he has been prepared for it is out of the question, and can only lead to a system of cramming or failure; but the University courses can be utilized by students as they have the opportunity. Thus it may be competent for pupils or draughtsmen who have had three or four years' practical experience to enter the courses in architectural engineering, specifications, or those of composition, history, or design, and so learn thoroughly what they have only picked up casually during their pupilage.

HALL, RESIDENCE, R. A. PEABODY, CEDARHURST, L. I.

ARTISTIC EMPLOYMENT OF MATERIALS.

J. H. HASTINGS.

MATERIALS used in building are so many and various that they form a very considerable item in the architect's work. They, in fact, put into their natural and improvised order, form the

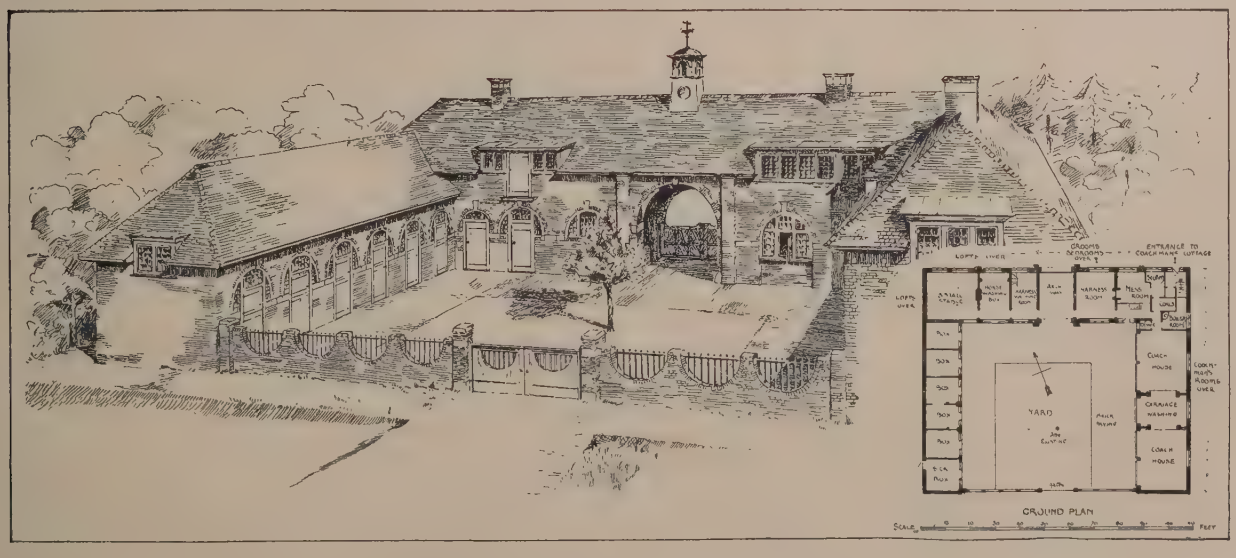
DINING-ROOM, RESIDENCE, R. A. PEABODY, CEDARHURST, L. I.

building itself. In the age of stucco when the plasterer was in the ascendant, material was subordinate, and architecture was more or less an art of moulding or casting in one material. Internally all was painted woodwork and plaster. We have now come to understand the *role* of material in design; brick and stone, terra-cotta, plaster, wood, and metal each play a part in the programme, and to a large extent differentiate one part from another. Our progress in architectural design is largely attributable to the place material has assumed. During the period of imitations of styles, the process of designing in a plastic material was favorable. It lent itself to reproduction of forms without relation to detail. What had been evolved from different materials in forming architectural style and detail were simply copied in stucco, as the modeller reproduces a building in cardboard or cork, or some other easily wrought substance. Architectural form, as derived from various materials like stone, brick or wood, was not practiced. A very different

SECOND STORY PLAN, RESIDENCE, R. A. PEABODY, CEDARHURST, L. I. Renwick, Aspinwall & Owen, Architects.

order of things prevail now. Material has become an important factor in design; we give each material its true place in the building structurally, and we try to make each expressive, and to some extent artistic. But we have not yet succeeded in this latter purpose. While we have learned the proper manner of converting, treating, and using our materials, we are decidely backward in giving them their true expression in a building. It is not unusual to find a "mix up" of materials of very different kinds without any proper sense of relation, or gradation, or color—a kind of magpie architecture repulsive to the man of taste.

Terra-cotta has largely superseded the softer varieties of stone for dressings, and is used in much the same way; but architects have not yet learned how terra-cotta should be applied in relation to brickwork. Sometimes we see it employed wholly or largely in the lower story of buildings, both as a facing to the walls, and in the moulded work of jambs, &c.; above, all is brickwork, except window dressings, as if the more valuable material got exhausted before the first floor was reached. In other buildings we see the terra-cotta used most plentifully in the upper stories. Both of these extreme courses may be right in some cases. We do not believe in an



DESIGN FOR A STABLE. Walter Cave, Architect.

OUT-OF-THE-WAY NOOKS IN ENGLAND—COTTAGE ON THE THAMES. Never before published.

equal mixture of brick and terra-cotta, which has a spotty and fidgety effect. There ought to be some gradation. The logical course seems to be to use the material mainly in those parts where there is more detail and fenestration, as the material is best adapted for the more elaborate portion of the facade. The blocks can be moulded and cast into any shape, and they lend themselves with more facility to fenestral design than brick. The principal then appears to be to use the terracotta in the more detailed parts, and to reserve the brickwork for the lower walls, where the crushing weight is great, as in the piers of the lower story.

Materials should be arranged or combined so as not to offend our sense of color. This is a principle that ought in some measure to regulate our design. In the use of stone of different colors, the idea of gradation or contrast should be observed, if possible; that is, of placing the grey or darker shades of stone in the lower part of the building, and the richer and warmer stone above, unless by so arranging them the less durable and softer stones are placed where the greatest wear is expected. We have not learned, as we ought to have done, the decorative value of color in materials. We frequently see stone-fronted buildings with intermixed stone; two or three kinds of stone—brown or grey and white, or brown and white, without any reference to position. An increase of tone or color upwards or downwards is essential to decorative unity, so that the eye may be carried up or down by an easy gradation of tone. On the other hand, to place our rich materials in jambs, and shafts and windows in the ground story, and again above with light or grey materials intervening, is to destroy this scheme of color harmony. The principle of gradation has been carried out in all the more beautiful buildings in Italy, in the exterior of St. Mark's and other Venetian palaces, in which marbles are introduced. The gradation of color terminates in a focus or spot of predominant color, and the Palazzo Publico of Piacenza, exhibits this gradation from cool-toned marble in the piers to the pink-grey of the upper arches and spandrels, culminating in the red terracotta or bright red brick of the battlements. There is a reason why the brightest and richest material should be at the top of a building: it is seen better. We might give a little more brightness to our buildings, if we applied this principle by focussing the bright materials by means of friezes and bands in the upper part of our facades. In a roof of tile and slate, the same principle can be observed by varying the size of the courses and tints. The value of panels and bands, glazed tiles, and the like may be increased in this way. The color may be focussed in them. In internal ceramic decoration the same gradation of color is necessary to prevent discordant effects, and in woodwork also this principle may be observed, though in another way. The borders of floors should bring down the color of the lower parts of walls or dadoes, and be made warmer than the central floors, or repeats of the same color of the walls be introduced. In framed or panelled work, such as wainscotting and screens, the dark colored woods can be used in the framing or in the panels, which-

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ever will best assist to bring down the color, or produce the most desirable contrast or harmony. We do not enter now into other materials of a subordinate kind, as we believe if the architect disposed his main materials, his stone, brick, pottery, and wood, with reference to a scheme of gradation, contrast, and color, instead of left them to chance, our buildings might be made much more decorative than they usually are. A proportionate sense of the masses of each material—how much there should be of brick and how much of stone or terra-cotta, of marble or granite, is also necessary. An equal quantity of red brickwork, and of stone or terra-cotta, may sacrifice breadth, especially if the two materials are too diffused. A breadth of effect is obtainable by using a larger quantity of one material over a considerable area, rather than dividing them or breaking them up. Contrast of material produced by combining grey with red granite and white stone, or light straw-color or buff terra-cotta, with deep-red brickwork, intensify some of the effects we have described. When the colors are strongly contrastive, it is safer to confine the dark material to a few parts than to distribute it over the building; as, for example, by alternate bands of dark brickwork and white stone, the effect of which is painfully restless.

In the wealth of texture and color which nature has bestowed, in our natural building stones and our clay goods, in our imported and native woods we possess an abundance of materials ready to hand that can be employed not only technically and usefully but decoratively, if we only applied certain artistic principles to their combination and arrangement.

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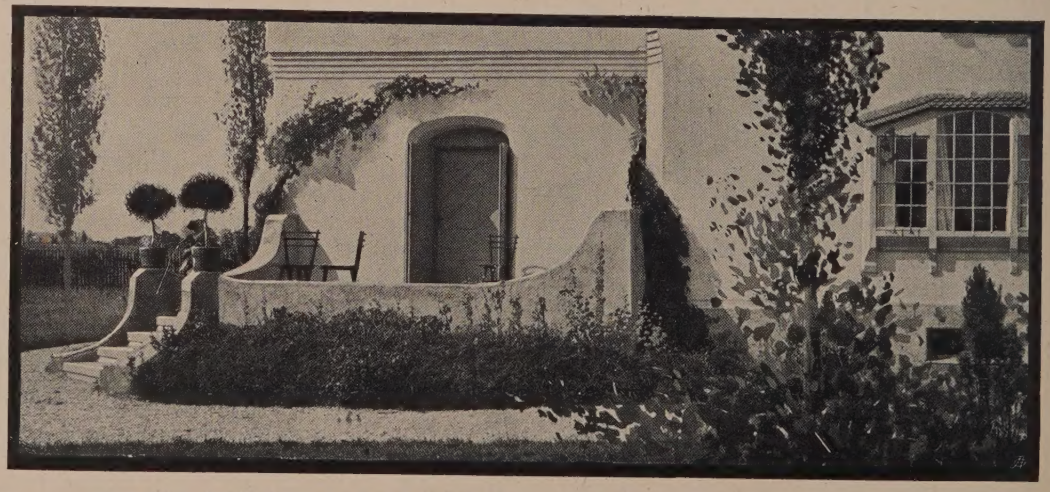
THE Commissioners of the Louisiana Purchase Exposition are considering a suggestion which has reached them in the form of a petition from the National League of Improvement Associations. This organization at its recent convention in Buffalo unanimously agreed to a resolution presented by Mr. Albert Kelsey, of Philadelphia, which, after drawing attention to the importance of the science of modern city making and to the fact that the subject has been represented in



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three international expositions abroad, urges that provision be made for an exhibit of the same kind at St. Louis. The proposal has so far commended itself to the commissioners that they have called upon its originators for a fuller explanation of what they have in mind.

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PAINTS IN ARCHITECTURE—"FLAT" PAINTING.

AT THE present time, it is safe to say, fully three-fourths of the interior painting done is either finished with an "egg-shell" glow or "flat." This means that the paint is left with a minimum quantity of binder, the fixed oil which commonly serves the purpose of holding the pigment in place being replaced by volatile turpentine or benzine. As a result the pigment is only loosely held and is easily jarred off, and if it be a "chalking" pigment, chalks more readily than usual.

The consequences of this condition in the case of poisonous pigments are readily apprehended, and such pigments, in "flat" painting, are undoubtedly a constant source of peril to occupants of rooms so painted.

Fashion will have its way, however, and so long as flat painting rules the public taste, "flat" painting must be supplied. But while we cannot dictate taste, we can remove the peril of disastrous consequences by specifying pigments that will not chalk, and if they did would have no ill effects. In other words, paints based on zinc white should be used to the exclusion of lead compounds, and for the tinting colors, the lead chromes, Prussian blue, copper, arsenic and lead greens, should be replaced by the mineral yellows, zinc chrome, ultramarine or cobalt blue, etc.

For the so-called enamel work zinc white is almost invariably preferred, on account of its color; but fewer architects remember the greater importance of selecting an innocuous pigment, when the work is to be flat. Zinc white has the further advantage, under these circumstances, of not chalking, and is therefore preeminently the proper base for "flat" painting.

CHARLES JOURDAIN.

The Architectural League of New York

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CHAS. M. SHEAN, Secretary.

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THE regular monthly meeting was held on Wednesday, Nov. 6, with President Hardenbergh in the chair. Owing to the absence of the chairmen of the different committes there were no reports.

The subject for discussion was the advisability of the New York Architectural League holding an exhibition at the Louisiana Purchase Exposition. It was finally ordered that the President appoint a committee to report at the next meeting The remarks of Mr. Cass Gilbert were extremely interesting.